

CLAIMS

I claim:

1. An imaging system to reposition an image capture device in a position relative to a subject of interest as that of a reference image of the subject of interest, comprising:
 - an image capture device;
 - a position apparatus on which the image capture device is mounted, operable to orient the image capture device relative to a subject of interest;
 - a reference image of the subject of interest;
 - a computational device coupled to the position apparatus, such computational device capable of receiving images from the image capture device and of receiving the reference image, performing a comparison, and communicating position adjustments to reposition the image capture device.
2. An imaging system as in claim 1 wherein the communication of position adjustments is via signals to the positional apparatus from the computational device.
3. An imaging system as in claim 1 wherein the communication of position adjustments is by means of positional adjustment data conveyed by means of a user interface.
4. A method for repositioning an image capture device relative to a subject of interest comprising the steps of:
 - a) initializing an imaging system, wherein initializing includes the steps of
 - a.1) obtaining a reference image of the subject of interest;
 - a.2) repositioning an image capture device relative to the subject of interest;

1 b) imaging the subject of interest;

2 c) computing the difference between the reference image of the subject of interest and
3 the image capture device image;

4 d) refining the position of the image capture device so that the image capture device
5 is in the same position relative to the subject of interest as that position from which the
6 reference image was obtained.

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8 5. A method as in claim 4 in which the step of initializing further includes the step of
9 generating a three dimensional model of the subject of interest through selection of
10 reference points in the subject of interest.

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12 6. A method as in claim 4 where the reference image is obtained after fixed reference
13 points have been selected in the subject of interest.

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15 7. A method as in claim 4 where the step of initializing includes extracting reference
16 points from more than one image of the subject of interest representing more than one
17 camera center.

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19 8. A method as in claim 4 where time has elapsed between the initialization process and
20 the repositioning of the image capture device.

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22 9. A method as in claim 4 where the computation of position is communicated to an
23 automatic position correction apparatus.

1 10. A method as in claim 4 where the computation of position is communicated to the
2 user through an interface.

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4 11. An apparatus for positioning an imaging device and adapted for operably coupling to
5 an image capture device and where such apparatus is capable of positioning said image
6 capture device, such that the positioning of the image capture device is controllable and
7 said apparatus is operable to orient the image capture device relative to a subject of
8 interest.

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10 12. An apparatus as in claim 11 where the positioning of the image capture device is
11 automated.